Gridpack/LHE production @ IIHE: SM EW

SM Electroweak

	Gridpack	LHE files
Z → ll (mass 10-50) + 0 jets	ok	100k
Z → ll (mass 10-50) + 1 jets	ok	100k
Z → ll (mass 10-50) + 2 jets	ok	100k
Z → ll (mass 10-50) + 3 jets	ok	25k (*)
Z → ll (mass 10-50) + 4 jets	ok	10k (*)
W → lν + 0 jets	(ok)	50M
W → lν + 1 jets	(ok)	>50M
W → lν + 2 jets	(ok)	50.3M
W → lν + 3 jets	(ok)	>50M
W → lν + 4 jets	(ok)	some jobs end up with < 100k events Did Strasbourg investigate this?

- **(*) Note:** problems with 100k evts/job (see last week), no problems when reducing #evts/job → 3jets: still cautious for intrinsic problem
- Tried Eric's solution for Z → ll + 3jets (quarks & gluons separately)
  → same problem...

Gridpack/LHE production @ IIHE: Higgs

Higgs samples

	Gridpack	LHE files
TT (dilep) + Higgs → X	**ok (**)**	*To be started*
TT (semilep) +Higgs → X	**ok (**)**	*To be started*
Higgs → X	**ok**	H → photons: **100k** H → bb: **<260k** (some jobs didn't achieve the expected 100k evts) H → WW: **800k** H → ZZ: **100k** H → gg: **200k**

- **(**)** TT+H gridpacks unfeasable with full HEFT model and up to 2 additional jets (running time)
  → now succeeded by using a 'massless' version of the HEFT model (see Gregory's mail) + *up to 1 additional jet* (instead of 2)
  ok?

Gridpack/LHE production @ IIHE: FCNC signal

TT signal samples

- e.g. full AnoTopCouplingsFull-kappa_hct_ProdConventions model unfeasible with up to 3 jets (running time)
  - → tried up to 2 jets, but Madevent crash during generate_events
    - ('Error: Failed despite same graph')
    - Being investigated...
  - → using **'massless' version of model** decreases running time by factor >20: up to 3 jets **becomes feasible**
    - Test currently running...

- In the meantime tested *Madspin* with up to 1 jet
  - → failed for AnoTopCouplingsFull-kappa_hct_ProdConventions_massless

```
MadGraph5Error : decay (6,) not define
```

with or without `t > c h` in madspin card

Seems to occur during width calculation